

# EndoVascular hybrid Trauma and bleeding Management (EVTM)

## Hands-on workshop



**Örebro, 7-8 Sept 2017**

*Endovascular and hybrid solutions* for the bleeding patient; Aorta balloon occlusion (**REBOA**) usage, vascular access and techniques

**Local organizing committee:**

Artai Pirouzram MD, Thomas Larzon MD, PhD, Asko Toivola MD,  
Rickard Lindgren MD, PhD, Kjell Ögren MD, Kristofer Nilsson MD PhD  
and Tal Hörer MD, PhD.

Dept. Cardiothoracic and Vascular Surgery

Dept. of General Surgery

Dept. of anesthesia and intensive care

Örebro University Hospital and University, Sweden

**Guest faculty** and cooperation with the Japanese society of diagnostic and interventional radiology in emergency, critical care and trauma (DIRECT). Led by **TBA**

**Visiting faculty:**

John Holcomb MD, FACS (USA) ? TBA

Joe Love, MD, FACS (USA)

Daniel Eefting MD, PhD (NL)

Martin Delle MD, PhD (SE)

Rigo Hoencamp MD, PhD (NL)

Viktor Reva MD, PhD (RU)

Per Skoog MD, PhD (SE)

**Target:** Surgeons with trauma interest, Intensivists, and interventional radiologists with interest in trauma, Emergency doctors and teams, military trauma teams (doctors and nurses).

**Date:** 7-8 September 2017 at Örebro University Hospital Training center and animal lab

**Registration:** [taina.palsson@regionorebrolan.se](mailto:taina.palsson@regionorebrolan.se)

**Workshop Director:** Dr. Tal Hörer MD, PhD Associate Professor of Surgery

**Live Feeds and web** by Association Ltd, Stockholm

**Partners:** TOKAI , Ziehm imaging, BBraun medical, COOK Medical, Mentice, 3dimprimo, STILLE, BK-Ultrasound , Örebro University hospital and University research council, **TBA**

**Objectives:**

**The main aim of this WS is to get a discussion and practice platform of endovascular and hybrid Trauma & bleeding management (EVTM) using a multidisciplinary approach.** Main issue is the **vascular access**, obtained by different methods (blind, Doppler, ultrasound, fluoroscopy and surgical access), usage in bleeding patients for temporary and permanent bleeding control. The usage of **Aorta Balloon Occlusion (ABO/REBOA)**, as well as endografts and embolization methods will be practiced. Bailout and alternative methods

will be discussed and practiced. Basic postoperative considerations as intra-abdominal pressure monitoring will be discussed as well. Participant's cases as well as ABOTrauma Registry cases will be discussed. The WS includes basic material knowledge, dry models as well as intensive **training on live tissue**. The WS give the basics for building a "REBOA or EVTm service" adjusted to the participants needs. The workshop is built for experienced physicians and adjusted to individual level during the practical moments. Participants will get all basic training and knowledge for REBOA placement as part of the EVTm concept.

## **Day 1 (7 Sept): Clinical Training Center (KTC), USÖ**

Endovascular trauma algorithm, theory on access and methods, physiology of REBOA/pREBOA/iREBOA and literature. Use of access, aortic/arterial balloon occlusion and other tools for the bleeding patient. Dry model training and Mentice<sup>®</sup> simulator training. Group discussion of participant's cases and ABOTrauma registry cases. Building a REBOA/EVTm service. Usage of endovascular tools (endografts, embolization material etc).

11:45 Gathering in the training centrum second floor

12:00-12:30 Lunch at the training center, Welcome and general Information.

10 minutes' presentations and short discussions (coffee served during sessions):

### **Changes might occur! TBA**

12:30- 12:40 Welcome and **EVTm**, the concept (Tal H)

13:00-16:30 Short lectures and discussions including cases and techniques

16:30-19:00 **Practical training in stations:**

**Practical scenario on a training model** with Mentice/REBOA (45 min).

Aorta 3D models. Ultrasound access station. C-arm usage, Angiography table, Mentice simulator REBOA station. Practice and discussion with faculty in groups. **Material** for endo-trauma and hybrid management. The "ABO/REBOA trolley". **Over the wire methods**

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(Seldinger) on dry model; Blind and ultrasound guided. Introducers and upgrading, **REBOA**, **iREBOA**, **pREBOA**, and **dREBOA**. Endografts deployments/embolizations tips & tricks.

*Around 19:00 Departure to dinner – (TBA)*

## **Day 2 (8 Sept): Animal lab training & research center, USÖ**

Meet and change at the KTC second floor at **07:00**.

07:15-08:30 **Cadaver “EVTM anatomical review- what can we do?”** including REBOA practical practice (**Preliminary-if available case, to be announced the day before**).

08:40-09:30 Breakfast with the industry (training center); Discussions

**09:30-15:00 Animal lab:** Hands-on animal lab including vascular and endovascular access. REBOA principles and practice. As time allows- Basic angiography training and embolization. Basic ultrasound guided access. Hybrid procedures. Lunch and coffee will be served in the lab. Every station with highly experienced faculty and one-on-one training as well as group scenario discussions on live tissue.

### **Practical training points in the animal lab:**

- 1) **Material usage** in bleeding patients, general considerations. The trauma-bay kit.
- 2) **Vascular Access** basic principles. Dissection techniques for access, Endoshunts (and shunts), hybrid procedures and other techniques. **Puncture; Seldinger technique, ultrasound, blind, fluoroscopy, cut down.**
- 3) **Upgrading/introducers/guide wires.** The failing access/alternatives including retroperitoneal, conduit, axillar etc. Access on venous side.
- 4) **REBOA:** Material and REBOA kit, practical deployment and using the ABO. Deflation and re-position issues; Intermittent/Partial inflation with MAP as target - **pREBOA**). Ongoing bleeding practice! Anesthetic issues during REBOA.

**-As times allows:** Case discussions #2 and the following:

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5) **Balloons in other locations** (Iliac, Subclavian, and Brachiocephalic trunk/zone I neck), Sizing and techniques. Double balloons.

6) Aortography and Angiography considerations (type, volume etc.) **Embolization** in target vessels: Material, access, coils, Onyx. Stent graft deployment (basic issues) practice. **Pelvic bleeding**. Bleeding management **scenarios on live tissue will be in cooperated**.

7) Endografts and embolization techniques for bleeders. Basic and advanced methods.

The practical training is built on individual profession and capacity

**Around 15:00 End and evaluation**

All participants will get the “Top Stent” handbook.

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More info on [www.jevtm.com](http://www.jevtm.com) under workshop